

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
28 July 2005 (28.07.2005)

PCT

(10) International Publication Number
WO 2005/068185 A1

- (51) International Patent Classification⁷: **B32B 15/08**,
H05K 1/03, 3/18, 3/38
- (21) International Application Number:
PCT/JP2005/000448
- (22) International Filing Date: 11 January 2005 (11.01.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
2004-005651 13 January 2004 (13.01.2004) JP
- (71) Applicant (for all designated States except US): **UBE INDUSTRIES, LTD.** [JP/JP]; 1978-96, Oaza Kogushi, Ube-shi, Yamaguchi, 7558633 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **YOKOZAWA,**

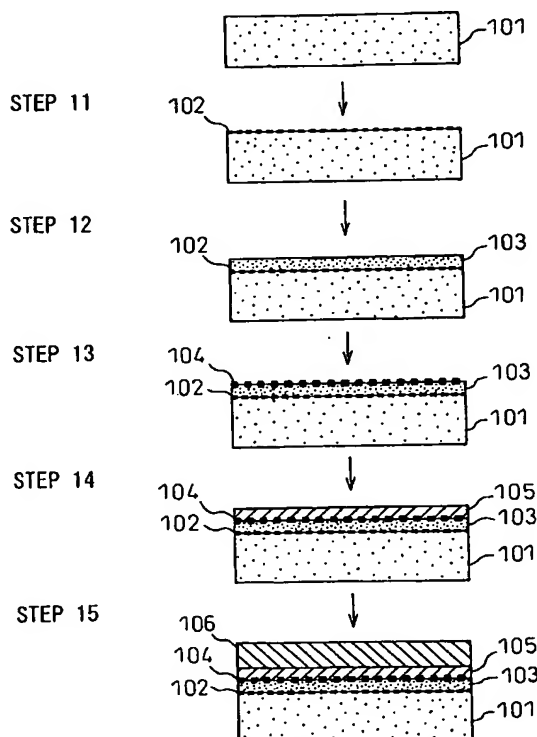
Tadahiro [JP/JP]; c/o Polymer Research Laboratory, UBE INDUSTRIES, LTD., 8-1, Goiminamikaigan, Ichihara-shi, Chiba, 2900045 (JP). **YAMAGUCHI, Hiroaki** [JP/JP]; c/o Polymer Research Laboratory, UBE INDUSTRIES, LTD., 8-1, Goiminamikaigan, Ichihara-shi, Chiba, 2900045 (JP). **BANBA, Keita** [JP/JP]; c/o Polymer Research Laboratory, UBE INDUSTRIES, LTD., 8-1, Goiminamikaigan, Ichihara-shi, Chiba, 2900045 (JP). **OOKUBO, Masao** [JP/JP]; c/o Polymer Research Laboratory, UBE INDUSTRIES, LTD., 8-1, Goiminamikaigan, Ichihara-shi, Chiba, 2900045 (JP).

(74) Agents: **AOKI, Atsushi** et al.; A. AOKI, ISHIDA & ASSOCIATES Toranomon 37 Mori Bldg., 5-1, Toranomon 3-chome, Minato-ku, Tokyo, 1058423 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,

[Continued on next page]

(54) Title: **POLYIMIDE-METAL LAMINATED BODY AND POLYIMIDE CIRCUIT BOARD**



(57) Abstract: A polyimide-metal laminated body obtained by forming a metal conductive layer on a polyimide film, which has been ceramic-modified or pseudoceramic-modified on at least the surface, by a wet plating process capable of accomplishing metal plating on ceramic. A polyimide-metal laminated body and polyimide circuit board having satisfactory cohesion in wet plating steps, maintain practical cohesion even after high temperature aging treatment, and exhibiting satisfactory electrical insulating reliability, can be obtained.



GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

- (84) **Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.